

Name _____

Date _____

EQUIVALENT FORMS OF A NUMBER: FRACTIONS, DECIMALS, PERCENTS

1. Go to www.google.com
 2. Type **NCTM illuminations** on the search line. Click on the second link: *Illuminations: Activities*
 3. Type in the Advanced Option box "**Fractions**" and check **6-8**. Click "**Choose**".
 4. Choose **Fraction Model II**.
 5. The applet begins by showing the fraction, decimal and percent equivalency for $\frac{1}{4}$.
 6. What is the decimal equivalency for $\frac{1}{4}$? _____ What is the percent equivalency for $\frac{1}{4}$? _____
 7. Experiment with the two interactive bars to change the size of the fraction.
 8. What happens to the *size* of the *fraction* when you **increase** the size of the **numerator** but keep the denominator constant?
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9. Change the fraction back into $\frac{1}{4}$ before you experiment with the size of the denominator.
 10. What happens to the size of the fraction when you **increase** the size of the **denominator** and keep the numerator constant? _____
 11. What happens to the size of the fraction when you **decrease** the size of the **denominator** and keep the numerator constant? _____
 12. Complete the table below to translate between fractions, decimals and percents. The first one has been done for you.

Fraction	Decimal	Percent
$\frac{1}{2}$	0.5	50%
$\frac{1}{3}$		
$\frac{1}{4}$		
$\frac{1}{5}$		
$\frac{2}{5}$		
$\frac{1}{8}$		
$\frac{3}{8}$		
	0.75	
	0.666666	
	0.625	
	0.6	
	0.875	
		30%
		70%
		90%
		80%

(continued other side)

ESTIMATING THE SIZE OF FRACTIONS BY USING BENCHMARKS

When is a fraction closest in size to 0, $\frac{1}{2}$, or 1? Check the benchmark that is closest in size to each fraction. The first one has been done for you.

<i>Fraction</i>	0	$\frac{1}{2}$	1
$\frac{6}{7}$			✓
$\frac{2}{15}$			
$\frac{3}{8}$			
$\frac{4}{9}$			
$\frac{11}{13}$			
$\frac{9}{10}$			
$\frac{1}{12}$			
$\frac{2}{19}$			
$\frac{5}{12}$			

What do you notice about the fractions that are closest in size to 0? _____

What do you notice about the fractions that are closest in size to $\frac{1}{2}$? _____

What do you notice about the fractions that are closest in size to 1? _____

Proper and Improper Fractions

- A proper fraction is one where the numerator is *strictly less than* the denominator.
- An improper fraction is a fraction where the numerator is *not* less than the denominator.

Classify each fraction as proper (P) or improper (I).

___ $\frac{3}{4}$

___ $\frac{5}{6}$

___ $\frac{9}{9}$

___ $\frac{5}{4}$

___ $\frac{14}{7}$

Write each improper fraction in 3 other ways: as mixed numbers, decimals, and percents.
The first problem has been done for you.

<i>Fraction</i>	Mixed Number	Decimal	Percent
$\frac{7}{5}$	$1\frac{2}{5}$	1.4	140%
$\frac{3}{2}$			
$\frac{8}{4}$			
$\frac{15}{5}$			
$\frac{9}{6}$			
$\frac{12}{6}$			
$\frac{5}{4}$			
$\frac{13}{10}$			